ABSTRACT

The invention relates to a self-doping type electrically conducting polymer comprising an isothianaphthene or thiophene skeleton where the polymer chains are crosslinked preferably through a sulfone bond, as represented by formula (2) or (5) below, which is imparted with water resistance and solvent resistance; a production process thereof; an electrically conducting composition film obtained by coating a composition containing the self-doping type electrically conducting polymer on a substrate and heating it; a product coated using the composition; and an electronic device containing the self-doping type electrically conducting polymer:

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$$R^{4}$$
 R^{5}
 R^{5}
 R^{5}
 R^{2}
 R^{3}
 R^{3}
 R^{3}
 R^{3}
 R^{4}
 R^{5}
 R^{5}
 R^{5}
 R^{3}
 R^{5}
 R^{3}
 R^{5}
 R^{3}
 R^{5}
 R^{5}

(wherein the symbols are as described in the specification).